

**ABSTRACT OF THE DISCLOSURE**

The present invention provides a forward power converter with a synchronized rectifying controller. The synchronized rectifying controller has a detection input for detecting a voltage of a secondary winding of a transformer, and thereby accurately measuring the PWM signal. Based on this measurement, the synchronized rectifying controller generates control signals for two secondary-side rectifying MOSFETs. The present invention also introduces a delay time using a timing resistor coupled to the synchronized rectifying controller. This avoids cross-conduction of the secondary-side MOSFETs. The present invention also includes an output current-sense mechanism to avoid reverse inductor currents under light-load conditions.